

Education

- Carnegie Mellon University** (Pittsburgh, PA)
B.S. in Computer Science, Expected Graduation: 2027

Projects/Research Experience

- Research Assistant, Physical Intelligence Lab, CMU** (Jan 2025 - Present)
 - Leading a project on proprioceptive tracking with a KINARM, adapting continuous tracking methods from visual tasks to improve data collection efficiency from 30+ mins to under 3 mins.
- Research Project** (July 2022 - Present)
 - Collaborated with a PhD team at Oxford University to develop a program automating tricuspid valve segmentation from MRI scans using Python and MATLAB; research pending publication.
- CMU Space Robotics** (2024)
 - Developed an image processing pipeline for lunar environment mapping, utilizing High Dynamic Range (HDR) and COLMAP 3D modelling software for a NASA rover.
- Braille Score (Hackathon – ‘Amplify’)** (2024)
 - Created an application that converts sheet music PDFs into braille using computer vision, enhancing accessibility for visually impaired musicians. As well as to midi files from handwritten or printed scores.
- Astronaut Health Monitoring System (HackCMU Hackathon – ‘Space’)** (2023)
 - Developed and prototyped an astronaut health monitoring system by analyzing excreta using sensors and Arduinos for early detection of potential health issues in space. Won Special Mention and award worth \$600.

Work Experience

- ML/DS Intern, Eternal Ltd** (May – Aug 2025)
 - Engineered and deployed a real-time NLP system at Zomato to extract structured intent from natural language food queries using GLiNER, ONNX, and gazetteer-enhanced matching.
 - Achieved low-latency performance (~20–60ms) and integrated with existing search infrastructure to power smarter, intent-driven recommendations, enhancing user experience.
- Open-Source Contributor – uProtocol Project, Eclipse Foundation** (May – Aug 2025)
 - Developed a high-performance message transport system in Rust for connected vehicles, using zero-copy for instant transmission of large data (like camera and LIDAR feeds).
 - Enabled shared-memory transmission of large Protobuf-encoded messages between processes with serialization, to improve performance for ADAS/AD applications.
 - Integrated seamlessly into Eclipse’s protocol stack, contributing to production-grade automotive software.
- Teaching Assistant, Web Application Development, CMU** (Aug 2025 – Present)
 - Mentored 60+ students in full-stack engineering principles such as React, REST APIs, and cloud deployment.
 - Held weekly office hours, and contributed to refining course content and project infrastructure.
- Undergraduate Tutor, 15-151 Discrete Mathematics, CMU** (Jan – May 2025)
 - Tutored one-on-one, assisting in problem solving and mastering a rigorous core CS course.
- Software Engineering Intern – Moneyboxx Finance Ltd** (July 2022)
 - Prototyped a cow muzzle recognition system using YOLO and Haar Cascade for farmer insurance and lending.
- Consulting Intern – Deloitte Consulting** (Jan – April 2022)
 - Analyzed UI/UX metrics for a digital maturity project for Google, improving publishing workflows.

Skills

Technical: C, Python, Rust, SML/NJ, MATLAB, LaTeX, OpenCV, TensorFlow, ML, HTML/CSS, JS, Django, NER, NLP
Soft skills: Project Management, Public Speaking, Leadership, Writing, Debating

Leadership and Professional Development

- Resident Advisor – CMU Summer Program** (June – Aug 2024)
 - Mentored residents and developed engagement programs to create an inclusive community.
- Tedx Speaker** (2023)
 - Delivered a compelling presentation on loss, resilience and taking charge of the future.